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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,330	03/28/2001	Akira Matsumoto	939_023	4237
25191	7590	07/22/2004	EXAMINER	
BURR & BROWN PO BOX 7068 SYRACUSE, NY 13261-7068			NASRI, JAVAID H	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 07/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,330

Applicant(s)

MATSUMOTO ET AL.

Examiner

Javaid Nasri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6/23/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Request for Continued Examination (RCE)

1. The request filed on 6/23/2004 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No. 09/819,330 is acceptable and a RCE has been established. An action on the RCE follows.

Abstract

2. The abstract of the disclosure is objected to because

a) In the abstract line 7, it is not clear how can 1/6th of "L" be equal to "L"

Correction is required. See MPEP § 608.01(b).

Specification

3. The disclosure is objected to because of the following:

a) On page 7, line 10, it is not clear how can 1/6th of "L" be equal to "L"

Note: These are few examples only. Applicant is required to check the entire disclosure and correct the disclosure accordingly.

Drawings

4. Figures 2e-2h, 6c and 7b should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement

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sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Refer to description of drawings on page 6.

Claim Objections

5. Claims 1-17 are objected to because of the following informalities:

- a) In claims 1 and 17, line 8, change "radium" to -- radius --.

Note: According to Merriam Webster's Collegiate Dictionary, 10th edition "radium" means "an intensely radioactive brilliant white metallic element".

- b) In claims 1 and 17, line 7, "the outermost housing groove" lacks antecedent basis.

Note: These are few examples only. Applicant is required to check all the claims and correct them accordingly.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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- a) In claims 1 and 17, line 9, it is not clear how can $1/6^{\text{th}}$ of "L" be equal to $1/2$ of "L"
- b) In claims 3, 7, line 2, it is not clear how can $1/4^{\text{th}}$ of "L" be equal to $1/2$ of "L"
- c) In claims 1 and 17, Y is being a thickness of the adhesive as well as Y is a distance between the flat surfaces of the substrate and the cover plate and in claim 1 the height of the meniscus is greater than Y.

Note: These are few examples only. Applicant is required to check all the claims and correct them accordingly.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Watanabe et al (6,045,269).

Watanabe et al discloses a holding member including a substrate (21) having flat surfaces arranged on opposite sides of a group of sectional V-shaped housing grooves (22) formed in the substrate for housing optical fibers on a top face (see figure 4b), the optical fibers each having an optical fiber tip end bare portion (4a, 4b) housed in the holding member; a cover plate positioned on the substrate', and an adhesive (see figure 4b) provided directly between the substrate and the cover plate (23) to fix the optical fibers in the housing grooves, wherein a distance between a

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center axis of the outermost housing groove and an end portion of the substrate is at least five times larger than the radius of the optical fibers (see figure 4b), and a distance Y between the flat surfaces of the substrate and the cover plate is $L/6 \leq Y \leq L/2$ (see figure 4b), with Y being a thickness of the adhesive and L is being a distance from a contact point between the housed optical fibers and the housing grooves to the cover plate- and wherein the adhesive forms a meniscus between (i) opposed sides of the cover plate and the flat surfaces of the substrate, or (ii) opposed end portions of the substrate and respective surface portions of the cover plate, and the height of the meniscus is greater than Y (compare figure 1 of the instant applicant with figure 4b of this reference), a height of a portion of the optical fibers which protrudes from the housing grooves on the substrate is substantially equal to the distance Y between the substrate and the cover plate (see figure 4b), the distance Y between the substrate and the cover plate is $L/4 \leq Y \leq L/2$ (compare figure 1 of the instant applicant with figure 4b of this reference), the adhesive is epoxy-based, (col. 17, lines 44-53, epoxy is thermosetting resin according to Merriam Webster's Collegiate Dictionary, 10th edition), a width of the cover plate is different from a width of the substrate (see figure 11, considering either 33a or 33b), a placement face for placing a covered portion of the optical fibers provided at a rear part of a housing groove forming face, and a step provided between the housing groove forming face and the placement face for placing and housing the optical fibers (see marked figures 1 and 2, attached),

However, Watanabe et al does not disclose (besides 112 rejection above), the dimensions claimed by the formulas, it would have been an obvious matter of design choice to have the dimensions as claimed by the formulas, since such a modification would have involved a mere

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change in the size or shape of a component. A change in size or shape is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955).

Note: Comparing the figures of the instant application and the reference cited as shown above the dimensions as claimed are obvious.

9. Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu (US 4,875,969, cited in previous office action) in view of EP 943, 942 (cited in previous office action).

For claims 1, 5, 10 and 17, Hsu, in figures 1 and 2 discloses fiber optic array comprising a holding member 17 including a substrate with flat surface on opposite sides of a group of V-shaped grooves 28b formed therein, the outermost fiber 33, which is 100 microns in diameter (see Table-1), is disclosed to be distanced from the edge of the base plate and it would be obvious for one of ordinary skill in the art to make the first groove more than 5 times the radius of the fiber away from the edge so as to obtain sufficient support surface for the cover plate. The pitch between the grooves is disclosed to be 150 microns. Grooves are 70 degree grooves (also see sketch-z previously attached) and the calculated distance L is $R \cdot \sin 45 + R$ or 78.68 microns and height of adhesive or 'Y' is 32.92 microns and therefore, value of Y satisfies the equation $L/6 \leq Y \leq L/2$. However, Hsu does not disclose meniscus formed between the opposed side of the cover plate and the flat surface of the substrate. EP 943 942, in figure 5 discloses a meniscus formed between the side surfaces of the cover plate and the substrate. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the cover plate smaller than the substrate as taught by EP '942, so that adhesive reliability and strength can be improved (EP '942, paragraph 0043). Please note that the adhesive extends to the

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side surface of the cover plate above the bottom surface of the cover plate and therefore, the height of the meniscus is greater than the thickness of the adhesive Y.

For claim 2, the amount to which the fiber protrude above the surface is the same as the distance between the substrate 17 and cover plate 21 (Hsu, figure 2).

For-claims 3 and 7, the thickness relationship $L/4 \leq Y \leq L/2$ OR $(19.67 \leq 32.92 \leq 39.34)$ is also satisfied with the dimensions calculated in the sketch-2.

For claims 4, 8 and 9, the adhesive disclosed is epoxy based (Hsu, column 3, line 44).

For claims 6 and 13-15, Hsu does not disclose a step between a placement face and a rear part groove forming face. EP 943 942, in figure 1 discloses a step portion between a placement face and a rear part groove forming face and in figure 5, discloses a step at 58, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a step between the placement face and rear face of the base plate as taught by EP '942, so as to lay the fiber in the base plate in an aligned manner between the rear part with jacket and the front part of the optical fiber without jacket.

Response to Arguments

10. Applicant's arguments filed on 5/21/2004 have been fully considered but they are not persuasive.

- a) Regarding applicant's comment that Hsu does show different width dimensions of the cover plate and the substrate. The rejection is revised accordingly.

- b) Regarding applicant's comment that EP '942 has almost the same width for the substrates 71 and 72. It should be noted that they are **almost same** and not **exactly same**, therefore they are different. Claim does not specify how much different.

Contact

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any correspondence to this action may be mailed to:

**Commissioner for Patents
Post Office Box 1450
Alexandria, VA 22313-1450**

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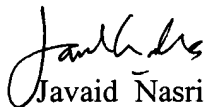
For additional information regarding this new address, which was effective May 1, 2003, see *Correspondence with the United States Patent and Trademark Office*, 68 Fed. Reg. 14332 (March 25, 2003).

Or faxed to: 703-308-7722 or 308-7724 (informal or draft communications should be clearly labeled "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to:

Crystal Plaza 4, Fourth Floor (receptionist)

2201 South Clark Place, Arlington, Virginia


Javaid Nasri
Primary Examiner
Art Unit 2839

JN
jhn
July 15, 2004